pranolol and phentolamine. This effect is avoided by tapering the drug over two to four days. Onset of action is within two to four hours and serum half-life is 20 hours. Twice-a-day dosage is recommended. Administration is begun at 0.1 mg twice daily and increased until control is achieved or limiting side effects occur, up to a maximum of 2.4 mg daily. Clonidine should not be administered to unreliable patients, and patients receiving it should carry an extra supply and Medic Alert® or some other identification tag.

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Talwin Myopathy

TALWIN (Pentazocine®) is a widely used analgesic. It has gained popularity because it was considered to be less addictive than other potent analgesics.

By 1971 at least two articles had appeared in the dermatology literature describing local reactions to Pentazocine injections. More recently, a much more profound and disabling reaction in the muscles termed "fibrous myopathy" was reported from several sources.

Two young men in their 30's were recently admitted, at the same time, to the chronic pain unit at Rancho Los Amigos Hospital. Both were suffering from fibrous myopathy of the deltoid area bilaterally, and this called the author's attention to this entity. Both young men had (A-B) abduction deformities and complained bitterly of their inability to cross the arm in front of them to carry out such functions as washing the opposite axillary fossa. One of the young men reported that his mother had undergone a surgical excision of both deltoid muscles to relieve this deformity which had followed use of Pentazocine over a period of time.

Steiner and co-workers reported a case with generalized abduction deformity of both upper extremities and lower extremities in a 42-year-old man who had persistent myalgia and progressive muscle stiffness. In this man the disability and rigidity progressed even though the injections had been terminated six months before he came under their care.

There are no specific enzyme or laboratory findings in this condition. The skin overlying the muscles may be atrophied and scarred to the fibrous degenerative muscles. Findings on electromyograms may show a mixed pattern or an interference pattern while at full effort. There is no muscle activity at rest as would be the case in other types of myopathy.

Temporary improvement has resulted in our patients by stretching and manipulating the tight upper extremities under general anesthesia. A brief course of prednisone is given at the time to minimize, it is hoped, re-scarring. Whether or not this treatment will give lasting benefit is very much in doubt. Avoidence of prolonged use of injectable Pentazocine seems the only rational approach to prevent this tragic disabling disorder.

J. BLAIR PACE, MD

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Computers in Family Practice

THE ROLE OF COMPUTERS in medicine generally, and in family practice specifically, has been gathering increased interest in recent years but has remained unclear. An experience base is now developing which can start to answer some of the initial questions concerning its value in medical practice and education.

A group of three family physicians in Damariscotta, Maine, recently reported their experience over three years with direct computer-patient interactions both in military and private practice. In developing their computer program, this group applied four essential criteria: (1) relatively low cost, (2) extensive programing with medically compatible language, (3) terminal constellations which permit direct nonthreatening patient interaction and (4) no technological expertise required by office personnel. A computerized medical record was developed and selected administrative functions and other aids to patient care were incorporated into the computer program where needed and economically feasible. The computer was thereby used for patient histories, patient education, physician education

(consultation), paramedic guide of triage and examination, office billing and aids to diagnosis. Computer services were leased from a commercial supplier remote from the office at a cost of $1,200 to $1,300 per month. Personnel savings, together with billings for patient histories, patient education and paramedic routines, are projected to cover these costs. To date, cost savings, physician satisfaction and patient acceptance have been adequately shown.

Although further experience is needed to more fully assess the real value of computers in various family practice settings, the state of the art is becoming more refined and there is promise that computer applications can be developed which will improve the quality, efficiency and effectiveness of patient care in family practice.

JOHN P. GEYMAN, MD

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Analgesics and Asthma

A SYMPTOM TRIAD of sinusitis, nasal polyps and asthma in response to aspirin sensitivity was first recognized more than 50 years ago. Aspirin and other analgesics, including indomethacin and paracetamol, may likewise precipitate an asthma attack in aspirin-sensitive patients.

This author has observed one aspirin-allergic patient with asthma who had repeated problems because he failed to recognize aspirin or related analgesics in various multi-drug mixtures. Each time a severe attack would occur, we would find the medication he had taken and discover in the fine print there was acetylsalicylate of some kind. The patient eventually died of agranulocytosis as a result of getting aspirin in a mixture which was not clearly labelled.

The group at Scripps Clinic and Research Foundation in La Jolla observed an 8 percent incidence of allergy to aspirin in patients referred to them. Many of the patients in this 8 percent group did not have the classic triad of nasal polyps and sinusitis. In this sense these persons were aspirin-sensitive but unrecognized as such.

The group at Scripps suggest cautious aspirin challenge under close supervision. The British express some misgivings about aspirin challenge, reporting that this has been known to prove fatal.

Family physicians would be well advised to think of aspirin as a potential allergen in all asthmatic patients, not only those with the nasal polyp sinusitis triad. It is also pertinent to realize that related analgesics, even though they have a very different chemical makeup, may produce the same asthmatic reaction.

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Metaproterenol as a Bronchodilator

METAPROTERENOL used throughout Europe and in Australia for the past ten years under the name of orciprenaline is now available in this country under the trade name Alupent®. It would appear to represent a significant improvement over previously available bronchodilator adrenergic drugs.

The action of metaprotherenol resembles that of isoproterenol, which has been widely used in this country. There are two distinctive advantages with metaproterenol. One of these is a 2- to 3-hour longer effectiveness, and the second is the availability and usefulness of metaproterenol as an orally administered medication. Metaproterenol, like isoproterenol, is a beta adrenergic drug with a greater affinity for the beta 2 receptors. Because of this, it does not produce pronounced cardiovascular effects. The usual effect is a slight, but not clinically significant slowing of the heart rate, with a slight drop of the blood pressure.

In comparison studies using metaproterenol and isoproterenol given by inhalation effectiveness was quite comparable, with response to metaproterenol being somewhat slower than response to isoproterenol. After 30 days of use, metaproterenol retained effectiveness up to four hours whereas isoproterenol retained effectiveness only up to one hour. After 60 days of use as an inhalant, metaproterenol retained effectiveness up to three hours with isoproterenol primarily effective only in the first five minutes.

Compared with ephedrine given orally, metaproterenol given orally in 20 mg doses appears to have a four-hour span of effectiveness without development of resistance. Ephedrine tends to be effective no more than three days if used continuously, after which the epinephrine stores are exhausted in the lung tissues and the ephredine